

REMARKS

In the Office Action of July 27, 2005, claims 9-17 and 21-30 are withdrawn from consideration due to the examiner's restriction requirement and the Applicant's provisional election with traversal. The traversal is now withdrawn, and claims 9-17 and 21-30 have been cancelled. Claims 1-8, 18, and 31 are rejected and claims 19 and 20 are objected to.

Claims 1-8 are rejected as indefinite under 35 U.S.C. § 112 (second paragraph) due to the indefiniteness of the phrase "for up to between 10° and 20° of forward flexion" in claim 1 and the phrase "from more than between 10° and 20° of forward flexion" in claim 2. Claim 31 is also rejected as indefinite under 35 U.S.C. § 112 (second paragraph) due to the phrase "restraining the pin on the forward link against greater than about 15°." However, claim 31 is deemed allowable if rewritten to overcome the indefiniteness rejection.

Claim 18 is rejected as anticipated by the Total Knee 2000 product manual. Claim 18 has now been cancelled. Claims 1 and 2 are rejected as obvious under § 103(a) over Chen, U.S. Patent No. 5,728,173 in view of Erickson, U.S. Patent No. 2,282,952. Claims 19-20 are objected to only as being dependent upon a rejected base claim, and have now been rewritten to include the limitations of cancelled claim 18. Claims 3 through 8 are indicated to be allowable if rewritten to include the limitations of rejected base claims and correcting the indefinite issues in those claims.

Turning first to the indefiniteness issues, in paragraph 0003 of the specification, it is explained that in bio-mechanical terms, flexion usually indicates decrease in the angle between body segments. It will be understood that rear flexion occurs when the knee is bent as if to squat down while forward flexion may occur when the knee is locked in a standing position and moves somewhat in a double jointed fashion in the opposite direction of rear flexion. As noted in the

background of the invention, it is desirable to provide some flexion action in the stance phase.

In connection with restraining the pin on the forward link against forward flexion, it is helpful to examine Fig. 3A where a forward link such as front link **56** is shown with an upper aperture **58** (shown in Fig. 1) that is mounted on shaft **43** which extends through the hydraulic chamber. Thus this is an illustration of a forward link having a first end pivotable about a first center of rotation. A pin **60** protrudes from the front link **56** into a channel on the side of the housing. The lower end of the forward link is connected to another center of rotation at aperture **62** on chassis **72**. It can be seen in Fig. 3A that when the front link **56** moves about fifteen degrees forward from a vertical position, the pin **60** will contact bumper cover **81** that is covering the channel. This achieves a hard stop and the front link **56** will not be able to proceed further in that direction. Prior to the hard stop, the bumper **80** contacts the pin **60** when the front link **56** is nearly vertical. As the front link **56** moves forward the bumper **80** is compressed and exerts resistance to forward flexion, preferably in a gradually increasing fashion. The bumper **80** is held in the channel by bumper cover **81** and the bumper cover **81** acts as a hard stop preventing the front link from forward flexion by more than about fifteen degrees in Figure 3A.

It will be understood that it is not required that the forward link be vertical in a condition of no forward flexion, but instead the requirement of claim 1 is that forward flexion be subject to some resistance against movement. Specifically, the bumper provides resistance against up to 20 degrees of forward flexion, and in claim 2 the bumper cover provides a hard stop. In the specification, paragraph **0037** explains the bumpers **80** act to resist against and bumper covers **81** act as hard stops against forward flexion. The intent of claims 1 and 2 was to indicate that the bumper provides resistance against forward flexion through an arc of ten to twenty degrees but at some point within that range, contact is made within the bumper cover and a hard stop is

effected. Some further explanation is provided in paragraph 0039, where it is described that the pin 60 makes increasingly resistive contact with bumper 80 until the position of the bumper cover 81 halts a counterclockwise movement after about 15 degrees of rotation or forward flexion.

In the context of the specification and drawings, the applicant believe that the original language of claims 1, 2 and claim 31 is comprehensible, however, minor wording changes have been made in these claims for clarification purposes and not to narrow the scope of the claims in any manner.

Turning then to the rejection of claims 1 and 2 as obvious over Chen in view of Erickson, Chen is said to teach a polycentric prosthetic knee joint with the housing, a forward link, and a rear link. The cushioning unit 6 of Chen, in addition to the prior art cushioning member 13 of Figure 1 are both located in the lower section or chassis 3. Erickson discloses an arcuate slot with pliable buffers at each end of the slot, however, Erickson is a single pivot joint. There is no suggestion that a buffered slot such as is disclosed in Erickson could be utilized in the upper housing member of a polycentric knee joint as opposed to the lower chassis portion where the buffers of Chen are disclosed. Neither does Erickson contain any mention of forward flexion, but instead on page two discusses the use of cords to impart swinging action to the knee at lines 10-15, and the possibility of locking the knee joint at lines 45-52. Furthermore, with respect to claim 2, there is no bumper cover which serves as a hard stop against the pin disclosed in Erickson. Indeed it seems there is no cover for the pliable buffers of Erickson whatsoever. Accordingly, due to the difference in knee structure, the applicant submits there is no suggestion that the slot and buffer construction of Erickson could be utilized in a polycentric joint, nor used to provide resistance against forward flexion, and that the combination of Chen and Erickson is

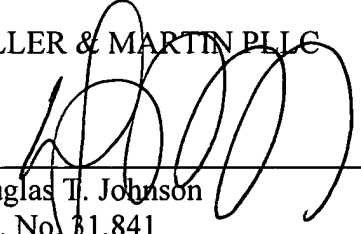
not suggested by the prior art but rather is hindsight reconstruction. Accordingly, applicant believes that claims 1 and 2 and their dependent claims are properly allowable.

SUMMARY

Claims 1 – 8, 19, 20 and 31 are pending in the application and claims 1, 2 and 31 have been amended to be more clearly understood in light of the specification. There is no motivation to combine the Chen and Erickson references, nor any reason to believe that the buffered slot construction of Erickson would be adaptable to a polycentric knee, nor provide resistance against a range of forward flexion. Accordingly, claims 1 – 8, 19, 20 and 31 are believed to be in proper form for allowance and such favorable action is requested.

Respectfully submitted,

MILLER & MARTIN PLLC



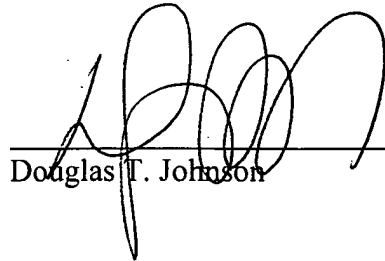
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on this 27th day of January, 2006.



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